UNITED STATES DEPARTMENT OF AGRICULTURE,

DEPARTMENT CIRCULAR 45.

Contribution from the Bureau of Plant Industry

(Forage-Crop Investigations).

WM. A. TAYLOR, Chief.

PARA GRASS (*Panicum barbinode*).

Para grass is a perennial, native of South America, and is grown somewhat commonly in Florida, to a rapidly increasing extent in southern Texas, and here and there throughout the Gulf coast region. It makes its best growth on damp soils, though it has been fairly successful on Texas ranches on heavy soils without irrigation where irrigation is needed for most other crops. It is not injured by prolonged overflows and makes a vigorous growth where the land is under water for several weeks. It is especially valuable for planting on the margins of ponds and on soils too wet and seepy for the cultivation of other crops. It is used for both hay and pasture. Para grass will not withstand a lower temperature than about 18° F. It is therefore adapted only to the extreme southern portion of the country, and perhaps to California. It has succeeded as far north as Charleston, S. C.

PLANTING.

Para grass is usually propagated by planting pieces of the running stems, which often make a growth of 20 to 30 feet in a season. Pieces of the stems from 6 to 12 inches long and having three or four joints grow rapidly when simply pushed into freshly plowed ground, so propagation is neither difficult nor expensive. The first growth from the cuttings is in long prostrate runners nearly as thick as a lead pencil, but as soon as the ground is fairly well covered the stems become nearly erect, soon reaching a height of 3 or 4 feet; so the closer the cuttings are planted the sooner a crop for mowing will be secured. When cuttings are scarce and a more abundant supply is wanted for the following season, or when the field is to be used for grazing only, the cuttings may be planted 16 feet apart in each direction, as they will then cover the ground in the course of the summer and afford considerable good grazing, though the quantity which can be mowed for hay will be small. When cuttings are abundant and the crop is wanted for hay they should be planted more closely, so that the ground may become covered and the erect growth secured more quickly. If planted only 1 or 2 feet apart in

each direction early in the spring, two or three good cuttings for hay may be made the first season. Cuttings may be planted at any time from early spring until as late as September, though late plantings will make little growth until the following season. Some prefer to plow in early spring, just when the grass is starting its new growth, plowing broadcast, harrowing, and then sowing with cowpeas. The peas and the grass come up together, and the mixture makes a hay of the very best quality.

USES.

If wanted for hay, Para grass should be cut when it reaches a height of 3 to 4 feet. From three to five cuttings may be made in a season, and as 1 to 3 tons of hay are secured at each cutting the total yield is heavy. Many Texas and Florida growers report having made as much as 12 tons of hay per acre in a season, while a few report much heavier yields. The hay is rather coarse, but is of excellent quality if cut as soon as it has made sufficient growth and before the stems become hard and woody. When the grass is allowed to stand too long before cutting, the stems become woody and unpalatable. When used for pasture the grass stands trampling well and is relished by all kinds of stock.

The yield is greatly increased by annual plowings and diskings. Some growers prefer to plow in November or December, as plowing at that time is sure to cover portions of the stems, so they will be well protected in case of a freeze, while other cultivators living below the frost line prefer to plow in July, sacrificing one midsummer cutting of hay, but loosening the soil so as to secure heavy August and October cuttings and abundant winter grazing. In the United States an annual plowing is certainly beneficial, but the season when it can be done to best advantage seems largely a matter of the probable winter temperature.

While this grass makes very long runners which root at every joint, the runners are wholly above the surface of the ground, and so can be destroyed without great trouble by a shallow plowing and raking late in the fall or during the driest season. In tropical regions of constant heat and heavy rainfall the grass is difficult to control, but it is very easily managed in any region where occasional frosts occur or where irrigation is practiced. It can not become troublesome in any part of the United States except, perhaps, in the extreme southern part of Florida.

S. M. Tracy,
Agronomist.

Washington, D. C., *May 31, 1919.*

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1919